

It is clear from these presentations and papers that Applicant's lower-energy hydrogen technology has been very openly discussed and has credibility with the scientific community.

This significant body of experimental evidence conclusively confirms the formation of lower-energy hydrogen and, by extension, the utility of Applicant's claimed invention. Given the Examiner's failure to even consider such evidence, it stands as un rebutted and, thus, easily overcomes the rejections of pending claims 1-10 under 35 U.S.C. § 101.

The Examiner's Theoretical Arguments Against the Patentability of Applicant's Claimed Invention are Misplaced

Applicant has presented compelling experimental evidence confirming that his disclosed catalytic reaction of atomic hydrogen forms hydrogen in fractional quantum states at lower energies than the traditional ground state ($n=1$), *i.e.*, hydrinos. The Examiner unfairly concludes that the pending claims are unpatentable under Section 101 without fairly considering that real-world evidence establishing the operability of Applicant's novel hydrogen chemistry.

The Examiner flat out ignores the that evidence in favor of arguments that Applicant's underlying theory, which predicts the formation of hydrinos, contradicts "laws" of Quantum Theory. While unclear how a "theory" can be transformed into "laws" of physics, Applicant is certainly not adverse to debating competing theories.⁵⁴

The Examiner should recognize, however, that there are limits to what this intellectual exercise can accomplish. As stated previously, the fundamental difference between the competing theories espoused by Applicant and the Examiner comes down

⁵⁴ Applicant provides this discussion of the theoretical underpinnings of his novel hydrogen chemistry despite the fact that the U.S. patent laws do not require it. See, *e.g.*, *Diamond Rubber Co. v. Consolidated Rubber Tire Co.*, 220 U.S. 428, 435-36 (1911); *In re Isaacs and Lindenmann*, 146 USPQ 193, 197 (CCPA 1965); *Tapco Prods. Co. v. Van Mark Prods. Corp.*, 170 USPQ 550 (6th Cir. 1971) (patent applicant need not understand necessarily how or why his invention works.)

to the issue of whether or not lower-energy hydrogen exists.⁵⁵ The theoretical debate over that issue can go on indefinitely unless and until the Examiner takes a serious look at Applicant's compelling experimental evidence, which ultimately settles this issue in his favor.⁵⁶

For the foregoing reasons, Applicant submits that the claimed invention fully complies with Section 101. Accordingly, withdrawal of the Section 101 rejection is respectfully requested.

The Rejection Under 35 U.S.C. § 112, First Paragraph,
is Improper and Should be Withdrawn

The rejection of claims 1-10 under 35 U.S.C. § 112, first paragraph, is respectfully traversed. Applicant submits that the Examiner has not followed the appropriate legal standards governing an enablement rejection and has ignored the experimental evidence of record that confirms the existence of lower-energy hydrogen. The Examiner only provides the following support for the Section 112 rejection:

Specifically, since the claimed invention is not supported by either a credible asserted utility or a well established utility for the reasons set forth above [regarding the Section 101 rejection], one skilled in the art clearly would not know how to use the claimed invention.

⁵⁵ See, in particular, References 27, 28, 32, 39, and 45. Note that Dr. Mills' Declaration certifies the experimental evidence disclosed in these and other References cited herein. [See Attachment A to the Appendix] Note further that the References cited herein, which include Applicant's peer-reviewed publications that experimentally confirm lower-energy hydrogen as disclosed, are listed by corresponding number in the attached compilation of References. [See Attachment B to the Appendix] Regarding the list of Applicant's journal articles, it should be further noted that the description "in press" means that the article has been through rigorous peer review and that the additional experiments and changes required by the referees have been made and accepted by them and the Editors. "Submitted" means that Applicant and his 11 Ph.D.'s and other technical staff believe that the paper is scientifically correct, represents a significant scientific advancement, and will be published.

⁵⁶ Much of this data has been derived from Applicant's working prototype energy cells that employ Applicant's catalytic process to produce lower-energy hydrogen. Applicant has made several overtures to various PTO officials to visit BlackLight's extensive 53,000-square-foot facility located in Cranbury, New Jersey. Most recently, Applicant invited the new PTO Director, James E. Rogan, for just such a visit so that he could witness firsthand the operation of BlackLight's prototype energy cells. [Attachment 66]]

First, Applicant has shown that his invention meets the utility requirements of Section 101, as fully discussed above. Therefore, one skilled in the art would know how to use the claimed invention and the Examiner's rejection fails.

Second, these erroneous conclusions by the Examiner and failure to consider the evidence are insufficient to support a prima facie case of non-enablement. The correct procedure laid out by the courts for making such a case is summarized in MPEP § 2164.05:

Once the examiner has weighed all the evidence and established a reasonable basis to question the enablement provided for the claimed invention, the burden falls on applicant to present persuasive arguments, supported by suitable proofs where necessary, that one skilled in the art would be able to make and use the claimed invention using the application as a guide. In re Brandstadter, 484 F.2d 1395, 1406-07, 179 USPQ 286, 294 (CCPA 1973). The evidence provided by applicant need not be conclusive but merely convincing to one skilled in the art.

Applicant may submit factual affidavits under 37 CFR 1.132 or cite references to show what one skilled in the art knew at the time of filing the application. A declaration or affidavit is, itself, evidence that must be considered. The weight to give a declaration or affidavit will depend upon the amount of factual evidence the declaration or affidavit contains to support the conclusion of enablement. In re Buchner, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991) ("expert's opinion on the ultimate legal conclusion must be supported by something more than a conclusory statement"); cf. In re Alton, 76 F.3d 1168, 1174, 37 USPQ2d 1578, 1583 (Fed. Cir. 1996) (declarations relating to the written description requirement should have been considered).

* * *

The examiner must then weigh all the evidence before him or her, including the specification and any new evidence supplied by applicant with the evidence and/or sound scientific reasoning previously presented in the rejection and decide whether the claimed invention is enabled. The examiner should never make the determination based on personal opinion. The determination should always be based on the weight of all the evidence. (Emphasis in original.)

The Examiner simply did not follow the procedures outlined in MPEP § 2164.05, since the experimental evidence and Applicant's written description were not properly considered and weighed. Indeed, they were purposely ignored. Thus, no prima facie case of non-enablement has been made and the burden to show otherwise has not shifted to Applicant.

Even if the burden to show enablement is assumed to have shifted, Applicant has provided more than sufficient disclosure of his theory and confirming experimental evidence to meet that burden and convincingly demonstrate enablement of the claimed invention. As discussed above, the standard to be used throughout the prosecution is a preponderance of totality of the evidence with due consideration to persuasiveness of the arguments.

The Examiner has provided no countervailing evidence supported by facts and credible reasoning that the claimed invention lacks utility. Rather, it appears from the sparse Office Action that the Examiner is improperly relying upon personal opinion to reject Applicant's claimed invention contrary to the above standard.

The complete lack of any evidence to support the Examiner's position contrasts sharply with the extensive experimental evidence and written description submitted by Applicant that demonstrates the utility and enablement of his claimed invention. Applicant's evidence exceeds the "convincing" standard set forth above. Indeed, the existence of lower-energy hydrogen has been shown by theory and supporting experimental evidence that has been peer-reviewed by Ph.D scientists and published in scientific journals.


Furthermore, Applicant has disclosed detailed working examples in the present specification that one skilled in the art could easily follow to practice the claimed invention.

For these many reasons, the Section 112, first paragraph, rejection should be withdrawn.

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Applicant submits that the present application is in condition for allowance and
Notice to that effect is respectfully requested.

Respectfully submitted,
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